What is Claimed Is:

1.   A method in a host computing system, the method comprising:

assigning, by an operating system resource, a prescribed virtual address space and a corresponding mapping value specified as user mode access for use by a consumer resource provider for execution of a memory access on behalf of a user-mode consumer process;

5   loading a unique translation map entry having the corresponding mapping value for the user-mode consumer process into an address translator, the address translator configured for controlling the memory access to a physical address space assigned for access to a host channel adapter; and

outputting by the address translator a work notification, received from the consumer resource provider and specifying a prescribed virtual destination address within the prescribed virtual address

10   space, to a corresponding mapped physical destination address within the mapped physical address space based on the unique translation map entry, the host channel adapter configured for detecting the work notification at the mapped physical destination address.

2.   The method of claim 1, wherein:

the loading step includes loading, into the address translator, respective unique translation map entries having the respective mapping values specifying respective physical address space offset values for respective user-mode consumer processes; and

5   the outputting step includes:

(1) receiving from the consumer resource provider, executed in context relative to an identified one of the user-mode consumer processes, the work notification specifying the prescribed virtual destination address, and

(2) outputting the work notification to the corresponding mapped physical destination address

10   based on the corresponding unique translation map entry.

3.   The method of claim 2, wherein the assigning step includes assigning as the prescribed virtual address space a contiguous range of addresses, the contiguous range having a prescribed size.

4.   The method of claim 3, wherein the assigning step includes selecting the contiguous range of address as a four kilobyte address range.

5.   The method of claim 3, further comprising identifying, by the host channel adapter, the user-mode consumer process requiring the memory access on the corresponding mapped physical

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destination address of the work notification relative to an offset determined based on the prescribed size and a zero-offset address location.

6.   A host computing system comprising:

a consumer resource provider configured for generating a work request to a prescribed virtual destination address on behalf of a user-mode consumer process requiring a memory access;

a host channel adapter configured for performing the work request by accessing a system area network, in response to detecting a work notification at a prescribed physical destination address;

an address translator configured for outputting the work notification, received from the consumer resource provider, to the host channel adapter at the prescribed physical destination address based on a unique translation map entry having a mapping value, specified as user mode access for use by the consumer resource provider, for mapping the prescribed virtual destination address for the corresponding user-mode consumer process to the corresponding physical destination address; and

an operating system resource configured for assigning to the consumer resource provider a prescribed virtual address space including the prescribed virtual destination address, and the corresponding mapping value.

7.   The computing system of claim 6, wherein the operating system resource is configured for assigning for multiple respective user-mode consumer processes respective mapping values and the prescribed virtual address space including the prescribed virtual destination address, the operating system resource configured for loading respective unique translation map entries including the respective mapping values into a memory accessible by the address translator.

8.   The computing system of claim 7, wherein the operating system resource assigns to the prescribed virtual address space a contiguous range of addresses, the contiguous range having a prescribed size.

9.   The computing system of claim 7, wherein the operating system resource is configured for assigning each mapping value based on a corresponding physical address space offset based on the prescribed size.

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10.   The computing system of claim 7, wherein the host channel adapter is configured for identifying the user-mode consumer process requiring the memory access based on the corresponding mapped physical destination address relative to an offset determined based on the prescribed size and a zero-offset address location, the consumer resource provider outputting the work request during

5   execution thereof in context relative to an identified one of the user-mode consumer processes.